



Performance Measures



■ Some terms that will be used to describe performance:

- Specific Impulse (Isp) :
 - The number of seconds that one pound of fuel will provide one pound of thrust.
 - This exact number depends on the type of engine, the type of fuel, and operating conditions.
 - The Shuttle main engines (LOX / H₂) has about Isp = 450 seconds
 - The Shuttle solids are about 280 seconds.
- Propellant Mass Fraction
 - The fraction of the vehicle that is propellant.
 - The Shuttle is about 0.88
- Thrust to weight ratio
 - Engine thrust divided by engine weight
- Trip Time
 - Time for a one way trip

